

Abstract

The present invention provides an apparatus that fastens elements of a frame assembly. The frame assembly implements fasteners as independent elements from both a housing and a corresponding housing cover. Exemplary embodiments of such fasteners may include the hook
5 nut fasteners disclosed herein. Generally, such fasteners include a central portion providing a contact area disposed in the plane of a housing fastening aperture, an extension tab providing a contact area on a housing interior wall, and an extension block providing a contact area on a housing exterior wall. The extension block may include a hollow portion configured to receive a securing bolt. One advantageous application of the invention relates to automobile motor
10 assembly housings. Specifically, in that embodiment the hook nut fastening assembly reinforces the motor housing and provides additional support to the assembly by reinforcing the joints between an end-cover and a motor assembly main body.